REMARKS

Claims 1-16, 20-25, 27-65, and 68-97 are pending in the application. Claims 105-111 have been withdrawn in accordance with the Examiner's indication that they are drawn to a patentably distinct invention. In this response, claims 1-4, 7, 13-14, 20-22, 27-33, 35-36, 39-45, 49-52, 56, 61-63, 65, 68-71, 75-82, 84, 88-90 and 92 are amended. Claims 19 and 26 have been canceled in this response. No new matter is believed to be added by this amendment. Applicant submits that all of the claims are now in a form for allowance.

Claim Rejections – 35 U.S.C. § 103

Applicants first submit that, for a *prima facie* case of obviousness, the cited prior art references (when combined) "must teach or suggest all the claim limitations" MPEP § 2143. Thus, if the combination of references does not teach each of the claimed limitations, a finding of obviousness fails. In addition, the Patent Office has the burden under § 103 to establish a *prima facie* case of obviousness, which can be satisfied only by showing some objective teaching in the prior art would lead one to combine the relevant teachings of the references. *See In re Fine*, 837 F.2d 1071, 1074 (Fed. Cir. 1988). As such, an Applicant, to overcome an allegation of obviousness, can show that the cited prior art references (when combined) do not teach or suggest all the claim limitations or that there is not an objective teaching in the prior art that would lead one to combine the relevant teachings of the references.

In the Office Action, claims 1-16, 19-65, and 68-97 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maissel et al. (USPN 6,637,029) in view of Herz et al. (USPN 5,758,257). The Office action provides that:

> **Although Maissel discloses assigning a score (weight) to the viewing parameter (see Column 12, Lines 35-41 for assigning a preference strength to the programs in the viewer's profile), but fails to teach determining the score for the viewing parameter based on a weighted linear combination of scores associated with the viewing parameter.**

Herz discloses a specific type of preference determination process using a technique called "clustering". When clustering is used groups of viewer profiles (that have been weighted) are used (see Column 34, Lines 13-65). Further note that the combination of scores in the viewer profiles can be further optimized in order to provide profiles representing linear programming in an iterative approach (see Column 35, Lines 1-7). Therefore, Herz clearly teaches determining the score for viewer parameters based on a weighted linear combination of scores associated with the viewing parameter.

In regard to determining the score for the viewing parameter based on a weighted linear combination of scores associated with the viewing parameter, Herz provides the following:

As noted above, customer profiles can be kept for groups of customers as well as for individual customers. Grouping customers together into customer clusters offers several advantages. Most importantly, if the clusters are accurate, improvement of customer profiles will be much faster, since far more movies are viewed per week by a cluster than by any individual in the cluster. Clustering also provides a means of setting up an initial profile for new individuals joining a video service in accordance with the invention, as they can, as a starting point, be given a profile based on demographic data or on surveys they fill out.

There is a long tradition of clustering people based on demographic or other data, and many clustering algorithms exist ranging from traditional methods such as factor analysis or the k-means clustering algorithm to more esoteric neural network-based methods such as Kohenen networks. Any of these can be used for the task described here, but the present inventors prefer the k-median clustering algorithm. Clusters can be formed based on (1) what programs people watch, (2) what features of programs customers rate as important (e.g., how similar their agreement matrices are), or (3) a combination of programs and features. One can

also include demographic or psychographic customer profiles or other information.

Herz at col. 34, lines 13-36; and

Once clusters have been determined, they can be used in several ways. As the profiles for the clusters are updated based on what the customers in the cluster watched, the profiles for the individuals in the cluster can be similarly updated. Thus, customer profiles can be updated both based on what they watch and on what customers with similar tastes watch. *These modified customer profiles would be used for determining virtual channels and for scheduling which movies to broadcast.*

As noted above, the purpose of clustering is to group objects with high similarity into clusters. In a multi-channel cable television system, individual channels are often devoted to their specific "audience", or to a group of customers who enjoy relatively homogeneous preference profiles. Prior to the design of the features of the channels, it is thus necessary to recognize these customer groups as well as their collective profiles.

Herz at col. 34, lines 49-65, emphasis in italics added.

Therefore, Herz discloses gathering information on a plurality of users (a "cluster"). This is distinguished from the present invention, which describes and claims determining an overall user preference score for the plurality of tracked viewing parameters based on a weighted linear combination of scores associated with each of the plurality of tracked viewing parameters for the user. In the present invention, the viewing parameters of only one user are tracked (and scored). An overall user preference score is determined, which is used to providing the user with a result that is responsive to the user input and to the overall user preference score. Herz discloses

amalgamating data from a cluster of users that is used *for determining virtual channels and for scheduling which movies to broadcast.*

The Office Action admits that Maissel fails to teach determining the score for the viewing parameter based on a weighted linear combination of scores associated with the viewing parameter. The Office Action further provides that Herz teaches a specific type of preference determination process using a technique called "clustering". When clustering is used groups of viewer profiles (that have been weighted) are used, and that the combination of scores in the viewer profiles can be further optimized in order to provide profiles representing linear programming in an iterative approach. Therefore, the Office Action admits that Herz discloses assigning a score for groups of viewer profiles, not developing a score for a user based on viewer parameters. Applicants submit that the prior art, alone or in combination, does not teach, suggest or make obvious, determining the score for the viewing parameter based on a weighted linear combination of scores associated with the viewing parameter for the user, as claimed in independent claims 1 and 49.

Therefore, because the prior art does not teach, suggest or make obvious all of the limitations that are found in claims 1 and 49, specifically determining the score for the viewing parameter based on a weighted linear combination of scores associated with the viewing parameter for the user, Applicants submit that claims 1 and 49 are not obvious over Maissel in view of Herz. As such, Applicants respectfully submit that claims 1 and 49 are now in a form for allowance.

Claims 2-16, 20-25, and 27-48 depend either directly or indirectly from claim 1, and claims 50-65 and 68-97 depend either directly or indirectly from claim 49. As the Court noted in *In re Fine*, "dependent claims are nonobvious under section 103 if the independent claims from which they depend are nonobvious." 5 U.S.P.Q.2d 1569, 1600 (Fed. Cir. 1988). Therefore, Applicants respectfully submit that because independent claims 1 and 49 are now nonobvious, claims 2-16, 20-25, 27-48, 50-65, and 68-97 are also nonobvious and are now in a form for allowance.

Second, the Supreme Court has reaffirmed the *Graham* factors for determination of obvious under 35 U.S.C. 103(a). *KSR Int'l Co. v. Teleflex, Inc.* (*KSR*), No 04-1350 (U.S. Apr. 30, 2007). The four factual inquiries under *Graham* require examination of: (1) the scope and

contents of the prior art; (2) the differences between the prior art and the claims in issue; (3) the level of ordinary skill in the pertinent art; and (4) the objective evidence of secondary consideration. *Graham v. John Deere* (*Graham*), 383 U.S. 1, 17-18, 149 USPQ 459, 467 (1966); see also 35 U.S.C. § 103 (2000).

The Court has further recognized that the requirement for a teaching, suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings, which was established by the Court of Customs and Patent Appeals, provides a helpful insight for determining whether the claimed subject matter is obvious under 35 U.S.C. § 103(a).

Where an invention is contended to be obvious based upon a combination of elements across different references, one should be able to identify particular reasons that would have prompted a person of ordinary skill in the relevant field to combine the [prior art] elements. *See, KSR Int'l Co.*, at 14, 15. This requirement prevents the use of "the inventor's disclosure as a blueprint for piecing together the prior art to defeat patentability—the essence of hindsight." *Ecolochem, Inc. v. So. Cal. Edison Co.*, 227 F.3d 1361, 1371-72 (Fed. Cir. 2000) (quoting *In re Dembiczak*, 175 F.3d 994, 999 (Fed. Cir. 1999)).

Applicants submit that the current construction of the cited references in the manner provided in the Office Action requires hindsight reasoning, which the Federal Circuit has explicitly rejected. *See In re Fritch*, 972 F.2d 1260, 23 U.S.P.Q.2d 1780, 1783 (Fed. Cir. 1992). As stated above, Maissel alone or in combination with Herz does not teach the limitation of the prior art, alone or in combination, does not teach, suggest or make obvious, determining the score for the viewing parameter based on a weighted linear combination of scores associated with the viewing parameter for the user, as claimed in independent claims 1 and 49, from which claims 2-16, 20-25, 27-48, 50-65, and 68-97 depend directly or indirectly. Herz does not correct the failings of Maissel as Herz discloses gathering information on a plurality of users (a "cluster"), not on an individual user. It would not have been obvious to one of ordinary skill in the art to combine Maissel in view of Herz, and the subject matter of the limitations not taught by either, to arrive at the presently claimed invention. Applicants earnestly request reconsideration, withdrawal of this rejection, and allowance of claims 1-16, 20-25, 27-65, and 68-97.

Conclusion

Applicants have amended claims 1-4, 7, 13-14, 20-22, 27-33, 35-36, 39-45, 49-52, 56, 61-63, 65, 68-71, 75-82, 84, 88-90 and 92. Applicants submit that the prior art does not teach, suggest, or make obvious the elements of claims 1-16, 20-25, 27-65, and 68-97. Applicants submit that all the remaining claims of this application are now in a form for allowance, and respectfully request the Examiner to expeditiously do so.

No fee is believed due beyond the fee for a request for an extension of time that accompanies this paper; however, the Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. 14-0629.

Applicants request the Examiner to contact the undersigned directly at 678-420-9354 if there are any comments or questions in regard to this paper.

Respectfully submitted,

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